

# EMS and Public Health Bulletin

## A Strategy for Enhancing Community Health Care

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Throughout 2000 and 2001, a group of nationally recognized health care professionals gathered to consider innovative strategies for improving community health care. Four roundtable discussions were convened, bringing together experts from the public health and emergency medicine professions to identify opportunities for improving the delivery of community health services through collaboration between local EMS and public health professionals.

With leadership from the National Association of EMS Physicians (NAEMSP) and the American Public Health Association (APHA), and support from the National Highway Traffic Safety Administration and the Health Resources and Services Administration, the group articulated the potential value of collaboration between the professions, defining a range of benefits to the general community as well as to the local EMS and public health agencies. The group committed to pursue these benefits, using their combined experience to recommend strategies for local collaboration and their leadership to encourage participation by public health and EMS professionals nationwide.

### **EMS and Public Health Traditions: Complementary Approaches to the Same Goal**

Discussions between the EMS and public health professionals began with a comparison of the basic mission and function of two disciplines. This exchange confirmed their mutual commitment to protecting community health, and pointed out several fundamental differences in their approaches.

Perhaps the key difference between the methods of EMS and public health is the basic approach to health care taken by the two disciplines. EMS is traditionally a reactionary service, optimized to respond quickly and effectively to acute episodes of illness or injury, and relying on a sophisticated public access communication system to detect incidents and target the response. In contrast, public health is primarily proactive, utilizing the epidemiologic method to systematically identify threats to community health, and intervening mainly through manipulation of environmental factors, such as air and water quality, or through strengthening the community immunity to disease.

EMS and public health also differ with respect to the direction of intervention. EMS provides individual patient-based, while public health is a community or population-based service. This difference is evident in the tools used by either group, public health utilizing policy and regulation to guard the community well-being and EMS using a fleet of mobile emergency care providers to deliver a focused response, render quick on-scene care, and transport patients to definitive care facilities.

As the EMS and public health representatives described their missions, it became clear to both groups that the two disciplines are complementary, and not mutually exclusive. For example,

EMS professionals could see obvious benefit in adopting some public health conventions, such as the use of population-based data to identify problems and allocate resources. The public health representatives realized that the traditional EMS assets of mobility and outreach could greatly facilitate the delivery of public health services.

## **The Ideal Collaboration: Local Focus, Flexible Approach**

With enhanced understanding of the nature of one another=s professions, roundtable participants devoted time to considering the ideal objectives for collaboration between EMS and public health services at the local level. Discussion centered on two criteria, the importance of focusing the collaboration on identified community health problems, and the need for local flexibility in defining roles and responsibilities for each discipline to meet these needs.

From both the EMS and public health points of view, the need for community health care to focus on local problems is uppermost. Roundtable participants felt that the specific objectives of collaboration should be determined by a local needs assessment. The community=s comprehensive health care needs should be considered by both EMS and public health administrators, and appropriate areas for joint activities identified.

Roundtable participants agreed that the assignment of specific roles between EMS and public health personnel should be determined locally by agreement between leaders of the two disciplines. The optimal distribution of responsibilities will depend on local factors such as access to target populations, system resources, and health care policies and authority.

## **Growing Support for Change**

Over the past several years, EMS and public health professionals have increasingly turned to non-traditional means for overcoming the challenges facing their health care delivery systems. Increasing health care demands and decreasing resources have motivated far-sighted professionals from both disciplines to consider new strategies for extending the value of existing resources. From the EMS perspective, these ideas were articulated and promoted in the vision document, the *EMS Agenda for the Future*. Public health professionals followed a similar strategic planning process with the Medicine and Public Health Initiative and Healthy People 2010.

### **The EMS Agenda for the Future**

In 1996, the EMS community laid out a vision for the future of emergency medical services, the *EMS Agenda for the Future*. The vision is the result of extensive deliberation and consensus building within the profession and defines an expanded role for EMS in the community. A key element in this projection focuses on the integration of EMS services with other community health care systems, especially public health. The EMS Agenda proposes that this collaboration will extend the effectiveness of both services, multiplying the influence of EMS through the adoption of population-based

intervention strategies, and empowering public health with new community outreach potential.

### **The Medicine and Public Health Initiative**

Recognizing the potential benefits of collaboration between medicine and public health, in 1994 the APHA and the American Medical Association (AMA) established a working alliance to develop innovative solutions to deal with critical health needs. The Medicine and Public Health Initiative has since promoted joint strategic planning and stimulated collaborative efforts at the national, state and local levels.

The Initiative focuses on engaging leading medicine and public health organizations and individuals in efforts to reshape health education, research and practice. The seven primary goals of the initiative are as follows:

**Engaging the Community** in an effort to change existing thinking within academic health centers, health oriented community organizations, health care delivery systems and providers, and among health care purchasers to focus them on improving the health of the community.

**Changing the Education Process** by expanding public health's understanding of medicine and medicine's understanding of public health.

**Creating Joint Research Efforts** by educating clinical and public health researchers, focusing on significant health issues, and promoting public and private funding of research to support conceptual and institutional linkages between public health and medicine.

**Devising a Shared View of Health and Illness** that provides a conceptual framework for collaboration between the professions.

**Working Together in Health Care Provision** by developing a framework, including standards and strategies, for integrating health promotion and prevention services and activities into both clinical and community settings.

**Jointly Developing Health Care Assessment Measures** to improve the quality, effectiveness, and outcomes of health care.

**Creating Networks to Translate Ideas into Actions** by outlining processes for translating and implementing proposals from the Medicine/Public Health Initiative.

### **Healthy People 2010**

Like the *EMS Agenda for the Future*, Healthy People 2010 is a national plan intended to

focus health care attention and resources on a number of critical objectives. These objectives focus primarily on public health measures, emphasizing two broad population-based goals: increasing the quality and years of healthy life, and eliminating health disparities among segments of the population. With support from the U.S. Department of Health and Human Services, Healthy People 2010 was developed by a consortium of several hundred health agencies and organizations and is now widely endorsed by the public health community. A number of the specific objectives in Healthy People 2010 pertain to emergency health care, including issues such as the accessibility of rapidly responding emergency services, availability of organized systems of trauma care, and the provision of online medical direction for the care of children.

## **The Benefits of Collaboration**

Discussion of the specific benefits of EMS and public health collaboration began with the EMS representatives offering their perspective, which led to a reciprocal viewpoint from the public health professionals, and finally to a joint statement concerning the value to the community.

### **To the EMS Mission...**

*Increased Professionalism* - a partnership with public health will enhance the professionalism of EMS, expanding the knowledge base of EMS providers and facilitating linkages with academic institutions.

*More Analytic Approach* - EMS will benefit from experience with the data-driven problem identification and evaluation methods utilized by public health professionals, using data to identify and manage EMS patient safety issues.

*Use of Public Health Data for EMS Purposes* - public health data will enable EMS to target resources and evaluate interventions more effectively.

*New Funding Opportunities* - EMS can expand funding possibilities by contributing to public health priorities.

*More Satisfaction From Issue Resolution* - by adopting the public health approach, EMS providers will have opportunities to become more proactive in community injury and illness prevention programs.

*Strong Partnership* - public health can be a strong ally, collaborating and coordinating with EMS and other agencies involved in community health issues and helping to increase the recognition of EMS as a community health resource.

*Broader Community Perspective* - linkage with public health will broaden the outlook and approach of EMS systems from an individual focus to a community perspective.

*Expertise* - affiliation with public health will offer EMS access to specific technical expertise

such as epidemiology and disease management.

*Access to Career Ladder* - linkage with public health opens a range of career possibilities for EMS providers who otherwise have limited career-growth opportunities.

*Greater Coverage* - localized problems and high-risk populations identified through public health data can help EMS target services and expand community coverage.

### **To the Public Health Mission...**

*Prevention* - EMS providers offer a uniquely credible voice and a ready, mobile workforce for delivering injury or illness prevention messages.

*Visibility* - public health agencies will benefit from the high level of recognition and exposure that EMS enjoys in the community.

*Response Capability* - EMS offers a well-developed access and response system that could be used to extend the outreach of public health services.

*Rapid Communication* - the emergency communications system utilized by EMS could be of great value to public health, particularly during critical community health emergencies.

*Data Collection* - EMS patient information or medical records can provide nearly instantaneous aggregate data sources for public health surveillance purposes such as assessing the spread of illness symptoms.

*Referrals* - EMS providers could refer appropriate patients to public health facilities for care or follow-up.

*Cost Effectiveness* - integrating services and sharing resources will offer opportunities for both public health and EMS to reduce costs and improve the effectiveness of services.

*Access to Populations* - through the EMS system, public health can take advantage of routine access to a variety of high-risk community populations.

### **To Community Well-Being...**

*Reduced Health Care Costs* - collaboration between EMS and public health will provide each service with a greater range of resources and options for delivery of services, offering improvements in efficiency and reduced costs.

*Greater Accountability* - combining responsibilities will reduce uncertainty about roles and improve accountability for community health.

*Education* - with a simplified delivery system and improved community outreach, consumers will have a better understanding of methods of access to and proper use of the health care

system.

*Coverage* - combining the unique surveillance and access resources of EMS and public health will allow each service to extend its reach in the community, improving reach into underserved areas and populations.

*Security and Stability* - by combining resources and responsibilities, EMS and public health can assess the relative value of health services and allocate health care funding to provide the greatest value to the community, ensuring the continued availability of a balanced community health care system.

*Access* - utilizing public health information to extend the reach of EMS and the mobility of EMS to enhance the delivery of public health services will improve overall community health care access.

*Adaptability* - with improved surveillance and delivery, a combined EMS and public health system will be capable of quickly detecting and responding to community health needs.

*Improved Health* - with improved responsiveness, greater efficiency, and enhanced effectiveness, the bottom line is that a collaboration of EMS and public health will lead to improved overall health in the community.

## **Where It's Working**

Roundtable participants pointed out that while EMS and public health collaboration is not yet widespread, the concept has been proven in a number of locations. The group identified a number of specific examples and noted that the alignment of these case studies with specific Healthy People 2010 objectives underlines their relevance to both EMS and public health missions.

### **Emergency Access and Elderly Care in Metro Dade County**

*(Aligns with Healthy People 2010 Objective 1-10: Reduce the proportion of persons who delay or have difficulty getting emergency medical care.)*

Metro-Dade County, Florida EMS crews have implemented a program to improve emergency response for the community as well as care for the elderly. The elderly are vulnerable to abuse, neglect, and exploitation, and frequently use 9-1-1 out of desperation, trying to reach help for non-medical needs. Through the ELDER-LINKS program, Metro-Dade Fire Rescue crews are trained to evaluate 9-1-1 calls from elderly residents and determine whether their needs could be better met with community-based social services, such as those available from the Area Agency on Aging.

EMS providers are trained to identify signs of abuse, neglect or exploitation and equipped with field assessment tools and referral forms. When EMS providers respond to a 9-1-1 call and

discover a non-emergency need, they look for risk factors indicating underlying problems and refer the case to the ELDER-LINKS program. The elderly caller is then contacted by the Area Agency on Aging and offered services that might include personal care, homemaking care, legal assistance, mental health counseling, transportation, or meals at senior centers.

Over the past several years, Metro-Dade Fire Rescue has referred thousands of elderly residents to the ELDER-LINKS program, improving the quality of life of these community members, and reducing the number of non-emergency 9-1-1 calls. This results in more EMS units available for emergency calls and, consequently, improved response times.

### **Public Access Automatic External Defibrillator Program in Maine**

*(Aligns with Healthy People 2010 Objective 1-11: Increase the proportion of persons who have access to rapidly responding prehospital emergency medical services.)*

In early 1995, while looking at performance improvement data for cardiac care, Capital Ambulance, serving communities in Penobscot County Maine recognized that a number of system improvements were needed to assure rapid access to early assessment, reduced time to thrombolytic therapy, and earlier defibrillation for patients in cardiac arrest. Penobscot County is primarily rural with a number of small municipalities served by volunteer EMS services.

Working with the two local hospitals, community physicians, fire departments, and municipal first responders, a program was instituted to provide automatic defibrillators for all the local EMS agencies, 12 lead EKG units on primary paramedic units, and receiving stations in base hospitals. Further analysis revealed that often the “first” first responders to medical emergencies in rural communities were County Sheriff units, the only public safety personnel staffed on a 24-hour basis.

With the goal of improving care in the first 5-10 minutes of emergencies, automatic defibrillators and trauma first response kits were pilot tested in four sheriff units. This required a change in Maine EMS Rules to allow response by otherwise unlicensed EMS personnel. After several interventions and a successful resuscitation of a 16 year old, an agreement was reached with a local non-profit organization to equip every sheriff cruiser in the County with a defibrillator and trauma response kit.

### **EMS and Public Health Collaboration in New Hampshire**

*(Aligns with Healthy People 2010 Objective Area 7-10: Increase the proportion of tribal and local health service areas or jurisdictions that have established a community health promotion program that addresses multiple Healthy People 2010 focus areas.)*

The New Hampshire EMS, Public Health, and Safety Initiative is an outgrowth of the national roundtables sponsored by the National Highway Traffic Safety Administration, the Health Resources and Services Administration, the American Public Health Association, and the National Association of EMS Physicians. Among the first to replicate the national example, New Hampshire began their collaboration in November of 2001.

Leaders of EMS and Public Health from all levels in New Hampshire have since convened with the common mission: "To promote a collaborative community approach to enhance the health and safety of the public."

Advocates for this effort relied on New Hampshire's heritage of collaboration to promote health improvement initiatives utilizing existing models and resources.

Tasks undertaken to date include:

- Collection and organization of case stories of successful collaboration and share them with Roundtable constituencies.
- Organization of resources and contacts to assist community collaboration.
- Development of marketing opportunities to reach those that can benefit from identified programs and resources.
- Promotion of existing resources such as the NH State Library and NH Helpline.

Collaborative efforts have been developed through volunteers and in-kind support. Dedicated funding sources are being pursued to expand activities.

The initial focus for the EMS and public health collaboration is on injury prevention. Injury makes up more than 40 percent of EMS activity in New Hampshire, is a key public health concern, and affects New Hampshire residents of all ages. Leaders of the NH collaboration expect that success in this area will lead to other opportunities for the State's five thousand EMS providers, and the Public Safety and the Public Health community at large. The effort is also expected to improve community health care as well as providing career opportunities for New Hampshire health care professionals.

### **Crash Injury Research and Engineering Network (CIREN)**

*(Aligns with Healthy People 2010 Objective Area 15: Reduction in deaths caused by motor vehicle crashes.)*

CIREN is a multi-center research program involving collaboration between EMS and trauma care clinicians and engineers in academia, industry, and government. Together, these professionals are pursuing in-depth studies of crashes, injuries, and treatments to improve processes and outcomes. CIREN's mission is fundamentally a public health initiative, to improve the prevention, treatment, and rehabilitation of motor vehicle crash injuries.

CIREN utilizes a computer network to link ten Level 1 Trauma Centers, allowing researchers to review data and share expertise relating vehicle design aspects to injury causation. Results of these analyses are used in the design of safer vehicles. Since its creation in 1996, CIREN studies have contributed to a range of public health benefits, including the development of improved diagnostic tools to recognize occult, or hidden, internal injuries, more accurate recognition of



automatic seat belt-induced liver and spleen injuries for triage & treatment, development of URGENCY software for faster and smarter emergency medical care for crash victims, and improvements in communications and the organization of trauma systems for better care of crash victims.

### **Elderly Fall Prevention Program in Vermont**

*(Aligns with Healthy People 2010 Objective Area 15: Reduce hospital emergency department visits caused by injuries.)*

Concerned about the frequency of falls among the elderly in their homes, Upper Valley Ambulance, Inc. of Fairlee, Vermont created the program, "Home Sweet Home...Home Safe Home." This is a free program to both identify risks and prevent injuries within the homes of elderly residents.

Through this program, Upper Valley Ambulance educates their crews about the effects of aging, the progressive deterioration of the senses and physiologic reserves, and how to spot potential fall hazards in and around a residence.

Referrals for this service are received from caregivers, family members, social workers, etc. EMS crews perform a routine health exam, and risk assessment of the person's home. They are able to perform these assessments while on duty thus minimizing the cost of providing this service while assuring emergency coverage.

Along with identifying any fall hazards, EMS crews increase the safety awareness of elderly residents by educating them in fall-proofing their homes, making safety recommendations and correcting any obvious or easy to fix problems. EMS crews are also able to gather useful information such as precise directions to the residence, location of a key and access and egress issues. A completed copy of each assessment is kept in the ambulance and in the residence, making the information readily available should it be needed on a call.

### **San Diego County Serial Inebriate Program**

*(Aligns with Healthy People 2010 Objective 26-5, (Developmental) Reduce alcohol-related hospital emergency department visits.)*

San Diego County EMS providers recently joined other sectors of the health care community in initiating an innovative program that promises to provide better care for chronic inebriates as well as reducing the tremendous burden that this problem was placing on county healthcare resources. Stemming from the efforts of two San Diego County police officers, the Serial Inebriate program began in 2000 with a survey of county businesses and healthcare facilities to estimate the extent and cost of the chronic inebriation problem.

With new awareness of the scale of the problem, county officials assembled a coalition of healthcare, social service, law enforcement, and judicial agencies to design a comprehensive intervention to reduce recidivism, improve treatment, and cut economic costs. The Serial

Inebriate Program engages both law enforcement and EMS in the response to cases of inebriation and, in chronic cases, maintains the involvement of both the legal and healthcare communities through each of a well-defined sequence of care and adjudication steps.

This coordinated approach to the chronic inebriation problem benefits the inebriate, the healthcare system, and the community. The program ensures that chronic inebriates are not turned back to the community before they have received appropriate treatment, drastically reducing the recurring cycles of arrest, emergency department visit, and release that were failing to help the inebriate and draining healthcare resources.

The success of the Serial Inebriation Program can be seen in the sharp increase in the number of chronic cases now entering the county recovery program and in reports of relief and satisfaction from patients, healthcare providers, and law enforcement personnel that had been engaged in these destructive cycles. The key to this success is coordination, engaging EMS with community public health, social services, law enforcement, and adjudication to address common problems with innovative solutions.

**Emergency Medical Dispatch as Public Health Access in Atlanta – Fulton County, Georgia**  
*(Aligns with Healthy People 2010 Objective 1-10: Reduce the proportion of persons who delay or have difficulty getting emergency medical care.)*

Developments in telecommunications technology have created the potential for on-line public health education and referral services that complement the highly evolved 9-1-1 emergency access system. Since adopting the Medical Priority Dispatch System emergency medical dispatch program, the Fulton County Emergency Communications Center (FCECC) has developed alliances with several community organizations to improve access to community health services. By establishing a direct telecommunication link with these organizations, the 9-1-1 system is now able to match callers' healthcare needs with targeted community services, offer instant and direct referral, and provide an EMS response that is most appropriate for callers' needs. The FCECC has established formal relationships with the following organizations:

- Cardiac arrest calls that meet "Obvious Death" criteria are linked to the Fulton County Medical Examiner's Office.
- "Psychiatric/Abnormal Behavior/Suicide Attempt" calls are linked to the Fulton County Emergency Mental Health Service.
- "Overdose/Poisoning" calls are linked to the Georgia Poison Center.
- Plans are currently underway to transfer a specific subset of the lowest level priority "Sick Person" calls, to the Grady Memorial Hospital Nurse Advice Call Center for further triaging, health education, and disposition.

## **Where Do We Go From Here?**

While convinced of the far-ranging benefits of collaboration, roundtable participants

acknowledged the challenges to achieving widespread unity between EMS and public health. Overcoming the inertia of tradition and the myriad of obstacles to change will require a combination of guidance, motivation, tools, and resources. The group recommends a strategy for initiating this change that includes a well-publicized demonstration program to model and evaluate local implementation strategies, a dual credentialing program to encourage provider participation, and a number of specific tools, resources, and actions to enable local agencies to implement collaborative efforts.

### **Demonstration Program**

Roundtable participants discussed the need for a demonstration program, highlighting potential strategies for collaboration between EMS and public health and providing laboratories for assessing the benefits. The group agreed that a series of such demonstrations should be pursued, focusing on innovative methods for addressing priority public health issues. The approach recommended is a national grant program funded by a private/public partnership. Solicitations could be made among EMS and public health agencies nationwide, with awards made to a comprehensive array of examples.

### **Dual Credentialing Program**

APHA Executive Director, Dr. Mohammad Akhter, revealed plans to establish a new public health credentialing system that will include a specific credential for EMS professionals who achieve public health competencies. The new credentialing program will be built around web-based curricula, and will be available to EMS personnel across the country. This new program promises to facilitate EMS and public health collaboration and expand the career development potential for EMS professionals. The APHA plans to initiate the new program by 2003.

### **Addressing the Challenges**

Roundtable participants described a number of anticipated barriers, and for each identified three types of action that could be taken at either the national, state, or local levels, efforts that would hasten progress through *enhanced knowledge*, *changed attitudes*, or *revised practices*.

#### **Barrier:**

*Potential for new roles* - a greater collaboration between EMS and public health may significantly change existing health care roles and responsibilities and could result in resistance from those who perceive a threat to their job security.

#### **Recommended Actions:**

*Knowledge:* Evidence needs to be generated at the national level to substantiate the need for and effectiveness of EMS and public health integration.

*Attitudes:* When considering change, professionals from both EMS and public health backgrounds need to remain focused on the benefit to the public rather than the short-

term effect on their individual profession.

*Practice:* When EMS personnel are practicing public health interventions, public health officials should be involved in EMS oversight activities.

**Barrier:**

*Traditional roles & cultures* - overcoming traditions and long-held perceptions may be difficult, especially considering the vast differences in professional environments between EMS and public health providers.

**Recommended Actions:**

*Knowledge:* The horizons of both EMS and public health professionals need to be expanded by exposure to the other=s work environment and operations. At the national level, knowledge of one another=s mission and function should be included in the core professional education of each group. At the local level, visitations and ride-alongs should be encouraged to increase mutual understanding and appreciation.

*Attitudes:* In the longer term, the professional expectations of EMS personnel need to be shifted to include prevention in addition to response. Recruitment methods need to be adjusted to attract professionals who can derive job satisfaction from population-based care activities as well as emergency interventions.

*Practice:* At the national level, leadership is needed to create career path options for EMS personnel, including a means to acquire knowledge and experience in public health concepts. Incentives need to be institutionalized for encouraging the adoption of public health practices by EMS personnel. In the near term, local systems can encourage motivated EMS personnel to acquire public health knowledge as part of their regular continuing education.

**Barrier:**

*Traditional performance measures* - combining professions may mean combining very different performance measures and benchmarks, currently population-based for public health and response-based for EMS.

**Recommended Actions:**

*Knowledge:* Curricula and materials are needed to educate both EMS and public health professionals about theories and methods of performance measurement of the other discipline. EMS personnel need to be aware of their role in contributing to the Healthy People 2010 objectives, especially those addressing Access to Quality Health Services and Injury and Violence Prevention. Instructional materials are also needed for educating EMS professionals about public health methods, such as the use of population-based data. Public health personnel need additional training regarding the capabilities and resources of the EMS system, and regarding the potential for EMS activities to

contribute to public health goals.

*Attitudes:*

Public safety officials need to be receptive of public health leadership with regard to the selection of performance criterion for EMS, resulting in more use of population-based assessments such as injury incidence, and less use of specific operational measures such as response times.

*Practice:*

Public health leaders should encourage the profession to extend its concern to include injury problems, especially motor vehicle crashes. Both EMS and public health systems should develop means for feeding back performance information to the providers, to stimulate improvement and reinforce the importance of measurement. Public health and EMS professionals should collaborate on the identification of measures, which cross professional lines, such as using emergency department waiting times as a measure of health care access.

**Barrier:**

*Limited funds* - scarce resources for traditional core services for both EMS and public health may limit interest or ability to adopt roles, which are viewed as expanded scope.

**Recommended Actions:**

*Knowledge:* Compelling evidence needs to be generated to persuade potential funders to invest in joint EMS and public health activities. Funders could include state and local EMS and public health agencies, Federal agencies, and private foundations. Research and evaluation is needed to document economic benefits of collaboration.

*Attitudes:* Funding limitations should be seen as a reason to move forward rather than as justification for reluctance. With reduced funds available, we need to re-examine core services and search more methods to extend service efficiency. EMS and public health collaboration may reduce demand for core services and reduce health care costs.

*Practice:* Examples of low-cost best practices should be identified and documented. Research should be conducted to assess the effect of EMS and public health collaboration on overall community health care costs. Compelling presentations of the benefits of collaboration should be made to payers such as Medicaid, Medicare, and insurance groups.

**Barrier:**

*Lack of Cross Training* – The education of EMS and public health personnel has not traditionally addressed the theories and practice of one another's profession.

**Recommended Actions:**

*Knowledge:* The core curricula of each profession need to be updated to include

information on the other. Public health professionals need to be aware of the methods and operation of EMS, as well as the benefits of collaboration. Likewise, EMS professionals need to be instructed concerning the population-based approach of public health and how these methods can enhance the effectiveness of EMS services.

*Attitudes:* Both EMS and public health professionals need to appreciate the complementary nature of the two fields and overcome biases toward one or the other approach. Professionals from both fields need to understand and be tolerant of the perspectives of the other field.

*Practice:* Promote dual credentialing of EMS and public health professionals. Advance web-based programs from schools of public health to make training more accessible for EMS providers. Evaluate the effectiveness of on-line courses and refine web-based learning methods.

**Barrier:**

*Legislative Support* - state or local statutes and regulations may prevent effective collaboration between EMS and public health, such as those that prevent EMS personnel from administering vaccinations or limit EMS reimbursement to patient transport.

**Recommended Actions:**

*Knowledge:* Federal, State and local policymakers should be educated about the efficiencies of these methods, and made aware of rules, regulations, and legislation that directly or indirectly prevent collaboration.

*Attitudes:* Policymakers need to look beyond individual health care functions to recognize the implications of cross-functional collaboration on overall community health and safety. Both EMS and public health professionals need to become aggressive about championing the cause.

*Practice:* EMS and public health professionals need to work with organizations such as the National Council of State Legislatures to identify opportunities for increasing policymaker awareness.

**Barrier:**

*Communication* - EMS and public health have few established mechanisms to share information or ideas, such as common forums and organizations, data systems, or operational protocols that bring the two groups together.

**Recommended Actions:**

*Knowledge:* Increased awareness is needed among both EMS and public health professions regarding the need for communication and the importance of opportunities for sharing information.

*Attitudes:* In order to overcome traditional barriers to information flow between public health and EMS agencies, professionals from both fields need to recognize the benefits of information sharing and consider including the other in routine briefings, reports, and data dissemination.

*Practice:* EMS and public health officials should extend invitations and encourage participation of the other field in appropriate national, state and local EMS and public health meetings, conferences, and other events. They should also develop interdisciplinary health policy councils and remove administrative impediments to routine sharing of EMS and public health data.

**Barrier:**

*Range of Community Needs* - the specific nature of a local EMS and public health collaboration will likely be shaped by community needs, complicating efforts to produce easily adopted or transferred models for integration.

**Recommended Actions:**

*Knowledge:* EMS and public health professionals should be aware of techniques for interpreting and implementing national guidelines at the local level. Guidelines should be constructed to allow a range of implementation approaches depending on local EMS and public health resources.

*Attitudes:* EMS and public health professionals should be aware of the concepts underlying their collaboration and be flexible and innovative in their application. Health care providers should be cognizant of the spectrum of health care services needed by the community.

*Practice:* The two disciplines should collaborate on eliminating health care discrepancies in the community. They should work together to evaluate the needs of underserved populations and formulate national guidelines to promote their flexible application.

**Barrier:**

*Awareness of the Need for Collaboration* - to date, there has been little call for collaboration of EMS and public health from within either profession or from the community.

**Recommended Actions:**

*Knowledge:* Health care policymakers as well as national EMS and public health leaders should be educated concerning the complementary roles of the two professions and of the potential benefits of collaboration.

*Attitudes:* Health care professionals need to expand their scope of concern beyond the traditional EMS- or public health-specific measures to include an assessment of overall

community health. Program and budget justifications should consider effects on community health and administrative impediments to collaboration should be eliminated.

*Practice:* Publicize collaborative efforts to increase public and policymaker awareness of progressive health care practices. Utilize available opportunities, such as seasonal flu epidemics, to demonstrate benefits of a partnership between EMS and public health.

***Postscript:***

*The EMS & Public Health Roundtable Series was completed prior to the events of September 11, 2001. The terrorist attacks on the United States have underlined the need for the very types of collaboration that were discussed and proposed during these roundtables. Never has there been a more critical need for EMS and public health to collaborate on our common mission of protecting and caring for our communities.*

*In response to this urgent need, three of the organizations involved in the EMS & Public Health Roundtables, the American Public Health Association, the National Association of EMS Physicians, and the National Association of State EMS Directors established a Memorandum of Understanding in November 2001 to combine resources for addressing priority infrastructure needs. The groups have since organized a multidisciplinary coalition of medical and responder organizations that is developing educational tools for front line medical and public safety personnel. Only through this sort of collaboration at the local, state, and national levels will health services in the United States be able to adequately respond to community needs, especially those associated with future attacks of terrorism.*



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